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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,260	08/29/2003	Jyoti Mazumder	POM-13402/29	1953
25006	7590	08/24/2005	EXAMINER	
GIFFORD, KRASS, GROH, SPRINKLE & CITKOWSKI, P.C PO BOX 7021 TROY, MI 48007-7021			RAO, SHEELA S	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/652,260

Applicant(s)

MAZUMDER ET AL.

Examiner

Sheela Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment and response filed on May 18, 2005 has been entered and considered.
2. Claims 1-7 have been cancelled and claims 8-12 are newly added. Claims 8-12 are pending and presented for examination.

Response to Amendment

3. The objection made to the drawings for not showing every feature of the invention as specified in the claims is **withdrawn** in light of the cancellation of the originally presented claims.
4. The objection made to the drawings because of reference character "12" is **maintained**. The use of reference number 12 is objected to because of its use in designating both a base and a substrate. In Applicant's arguments, it is stated that the terms base and substrate "may be" synonymous. Applicant assumes the capability of these terms to be used synonymously even though the definitions of base and substrate do not define them to be synonymous. When used in certain arts, they may be synonymous; however, in the instant invention their similarities are not clearly defined. In whatever situation they are used their comparability should be identified and stated as such. The objection is maintained, as their likeness is not defined.
5. The objections made to the specification with regard to:
 - Figure 5 is **withdrawn** as this figure has been removed.
 - Line 17 on page 5 of the disclosure wherein reference number 14 is cited but the figure to which it corresponds is not known is **maintained**. The cited portion of the text begins by describing Figure 1, wherein reference number 14 is not present. The identification of a specific figure in relation to an element being described or explained enables clarity and better understanding of the claimed invention.
 - Line 16 on page 6 wherein "direct deposition head" is stated but the location of the element is not known is **withdrawn**.

- The use of sensors as per lines 11 and 12 on page 6 is withdrawn in light of the explanation given in the response.
- The lack of explanation of claimed features such as numerical control systems and deposition head, etc. is withdrawn as the claims directed to these features have been cancelled.
- The description of Figure 5 without the presence of Figure 5 is withdrawn as Figure 5 has been removed.
- The explanation set forth at line 13 on page 7 of the disclosure is maintained, as this portion of the specification is not clearly understandable.

6. The objections made to claims 3, 5, and 7 for being of improper form for failing to further limit the subject matter of a previous claim is withdrawn in light of the cancellation of these claims.

7. The rejection of claims 1-7 under 35 USC §112, second paragraph, is withdrawn in light of the cancellation of these claims.

8. The rejection of claims 1-7 under 35 USC §102(b) as being clearly anticipated by Koch et al. in USPN 6,122,564 is withdrawn in light of the cancellation of these claims.

Claim Rejections - 35 USC § 102

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,122,564 to Koch et al.

The reference of prior art to Koch et al. teaches a method and apparatus for forming deposits of molten metal on the surface of a work piece using a laser beam. The disclosure of the patented invention teaches the limitations of instant claim 8 beginning at line 30 in column 3 as well as the drawings of Figures 2 and 3. Koch teaches the feeding material to be a powder so as to create a deposit having physical dimensions (see col. 2: ll. 1-4 and ll. 42-44). The use of DMD process is taught by the prior art

as using DMD techniques to build parts, molds, and dies, see col. 3: ll. 52-56. The limitation of "wherein the layer of material has a very low solubility" in claim 8 is inherent since a chromium-molybdenum die is used in the explanation given by Koch et al. at column 8, line 18, et seq. The testing that is carried through by Koch et al. sets forth to ensure compatibility and usefulness between the elements in die-casting tooling. Instant claims 10 and 11 claim the use of a die cast die as the tool, as per the description of Figure 12 of the patented reference, a metal tool die having core and cavity parts is use according to a method of the invention. With regard to instant claims 9 and 12, the disclosure of Koch et al. uses a chromium-molybdenum material in an example of the patented method and apparatus as stated line 17, et seq. of column 8.

For the reasons stated above, the limitations of the claimed invention is taught by the prior arts of record; thereby, rendering the instant claims unpatentable.

Response to Arguments

11. Applicant's arguments filed May 18, 2005 have been fully considered but they are not persuasive. The rejection of claims 1-7 has been withdrawn due to the cancellation of claims 1-7. Claims 8-12 have been rejected for similar reasons.

12. Applicant's arguments and responses have been addressed above with regard to each limitation or objection/rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH


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shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. The fax number for the organization where this application or any proceeding papers is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sheela S. Rao
August 19, 2005

 8-22-05
ALBERT W. PALADINI
PRIMARY EXAMINER